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Family and cultural issues in AT service delivery

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**Family Center on
Technology
and Disability**

FCTD Conference Series: Family and Cultural Issues in AT Service Delivery

July 11– July 24, 2005

Family and Cultural Issues in AT Service Delivery

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EXPERT'S CORNER

Introduction

Effective assistive technology planning and decision making for children and youth with disabilities should include careful consideration of family and cultural factors. Inclusion of the family when considering assistive technology needs of the child is the key to identifying important family and cultural perspectives that can “make or break” the successful integration of assistive technology in the home, school, and community.

Despite the recognition that families should be integral to the AT decision-making process, family and professional partnerships have often been difficult to establish in practice. Cultural and language barriers may compound the difficulty of forging a strong connection between families and professionals. Families from different cultural backgrounds may be less inclined to participate in the process of considering assistive technology for their child for a variety of reasons, such as lack of knowledge about assistive technology, attitudes held by professionals, and differing cultural perspectives about assistive technology.

This month’s discussion experts, Phil Parette and Tom Nurse, will answer your questions and share their experience and knowledge about family and cultural issues in AT decision making. They will also offer strategies for educational professionals to develop more family-centered AT practices.

As always, we remind you that all are welcome to participate. We encourage you to ask questions and share your perspectives. We hope you'll join the discussion often during the month.

Experts’ Perspectives

Phil Parette:

To ensure effective assistive technology (AT) decision-making for children with disabilities, particularly during transition processes, families be actively involved in making decisions about AT being considered for their children. A family-centered approach is recommended practice for AT

decision-making, a process that involves careful gathering of information needed to address the family's strengths, needs and priorities, and to match the AT decision-making process with the family's cultural and linguistic background. It also involves matching the characteristics of the child with a disability to the environments, tasks, and features of devices.

An evolving issue in family-centered practice is the role of cultural and linguistic issues that may influence participation in AT decision-making and subsequent implementation of and support for devices and services. Culturally and linguistic based values may wield strong influences on family perceptions of AT. Understanding cultural and linguistic values is compounded by our current lack of understanding about children born between 1978 and 1982 who are part of the Millennial generation, and who have grown up in a world surrounded with technology. For these children, technology may be perceived (and desired) in very different ways than the education professionals and parents who participate in making decisions about AT for these children.

This discussion will focus on issues related to identifying and developing an understanding of family perspectives about family goals and expectations for AT that are often very different from the perspectives of professionals. A range of cultural and linguistic values will be explored, with emphasis on how such values may affect AT decision-making. It will also explore issues pertaining to the technology preferences of children with disabilities, i.e., less traditional ways of using technology to deliver educational services to children who are part of the Millennial generation, and examine ways in which education professionals can better understand these children and develop more effective family-centered AT practices in the future.

Tom Nurse:

My expert perspective is based on a family centered focus that I learned in early intervention years ago. To me this means that we must value and honor the family because they have the greatest vested interest in their child. We also need to start from where the family is rather than expecting them to be where "systems" may be.

Specific to assistive technology, by starting out with what is important to the family and the child, the team typically can help build buy-in and commitment. In addition, the more involved and informed the family is the greater the likelihood for successful implementation. I have learned to trust and respect many wonderful professionals that have helped our family, but ultimately, it is the family that is most typically the constant in the child's life.

Finally, I've learned that families may have the greatest freedom to speak in an IEP meeting but if you don't understand the language and processes of the system and use them, it is very hard to have many professional hear/understand what you're saying. By using effective tools/resources such as the WATI assessment tools and SETT processes, I have learned how to help get the rest of the team to start talking!

I wish it was easier, but ultimately if it doesn't happen for my child and thousands of others, we all lose out in the long run. Learning to be an effective advocate and collaborator is critical to helping your child while supporting the team that is there to help.

Brian

Experts' Bios

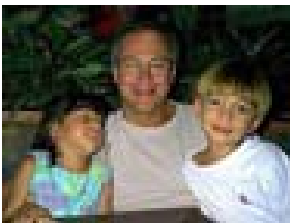


Phil Parette

Dr. Parette is Kara Peters Endowed Chair in Assistive Technology, and Director of the Special Education Assistive Technology Center, Department of Special Education, at Illinois State University. On graduating from the University of Arkansas in 1976 with dual certification in elementary and special education, he worked as a 4th grade elementary teacher, an Educational Diagnostician for the Department of Social and Rehabilitation Services, a special education teacher in the Department of Correction educational system, and as an early intervention teacher. He completed a Masters degree in Learning Disabilities from the University of Arkansas in 1978, and an Ed.D. degree in Special Education (Multidisabilities) from the University of Alabama in 1982. He has worked as a Research Associate in the Department of Family Medicine at the University of Arkansas for Medical Sciences, served as the Americans with Disabilities Act Coordinator for the Arkansas Easter Seal Society, and taught special education at several institutions of higher learning, most recently at Southeast Missouri State University (1993-2003). Between 2000-2002, he served as Dean of the School of Graduate Studies and Research.

Dr. Parette has published more than 200 scholarly works since 1982, with the preponderance of his work in the field of assistive technology (AT). In recent years, his work has focused on cross-cultural, family-centered AT applications. He was a primary co-author of the Arkansas Technology Access Program, one of the first nine states funded under the Assistive Technology and Related Assistance Act of 1988 (Tech Act). He has also developed an innovative CD-ROM, Families, cultures and AAC, that has received six major film and media competition awards. He currently serves as Editor of the new on-line journal, Assistive Technology Outcomes and Benefits, a collaboration between the SEAT Center and the Assistive Technology Industry Association.

Dr. Parette's current research and development activities at the SEAT Center focus on the development and implementation of an outcomes-based, national assistive technology coalition, that synergizes best practices created at Illinois State University with partners nationwide—vendors of AT devices, education entities, government, and not-for-profits including a successful Illinois AT coalition serving 415 school districts.



Tom Nurse

Tom Nurse is the father of two wonderful children, Shelby and Jordan, and has been married to his beautiful wife Elaine for almost twenty years. The Nurse family lives in Clearwater, Florida, in the Gulf coast town that Tom grew up in since he was three years old, over forty-five years ago!

The reason that Tom became involved in the disability movement was a direct result of his daughter Shelby being born three months premature, almost fourteen years ago. At the age of ten months of age, and after months of assurances that everything was fine, Shelby was diagnosed with Spastic Quadriplegia Cerebral Palsy. Six weeks later his job as a hotel executive was eliminated, thus began his years as a "stay home father"

Tom quickly immersed himself in the daily routine of therapies, developmental day programs and was encouraged to "get involved." He was also fortunate to be accepted into Florida's first class of Partners in Policymaking. Those weekend trainings and the people he met proved to be life inspiring and set the course for a new career and a different path in life.

As a result he also became involved in the Parent Resource Organization (PRO), which focused on family involvement in early intervention (Part H, at that time). As a father he also became interested in increasing the expectation, appreciation and need for father's involvement in their children's lives, particularly when one has a child with special needs.

After several years of struggling to find the balance between career, family, advocacy, and his daughter's specific needs, he committed himself to working in the disability field. Working for a year as a Parent Liaison, Tom traveled all across Florida helping build community involvement in early intervention. Then he worked for three years as Statewide Parent Consultant for the Florida Department of Health, Children's Medical Services Early Intervention Program until late 1999.

Tom then joined Family Network on Disabilities of Florida, Inc., and now directs Florida's new Parent Information and Training (PIT) center, as the Project Director for the T.I.L.E.S. Project (Transition, Independent Living, Employment and Supports) providing related workshops and one on one information for persons with disabilities and their families all across Florida. He strongly believes the philosophy that "informed" individuals and families can make better decisions.

Tom also has committed his passion and efforts to become a knowledgeable advocate and educator, with a special focus on assistive technology issues. Along with his daughter Shelby, he presents frequently to both parents and professionals on the impact and importance of assistive technology for individuals with disabilities and their families.

CONFERENCE

Transcript: Family and Cultural Issues in AT Service Delivery

- **Welcome!** by **Jackie Hess** on Jan 03, 2005
Welcome to 2005 and to the Family Center on Technology and Disability's first online discussion of the year. We've chosen the very important topic of "Family and Cultural Issues in the Delivery of AT Services" to begin this year's series of online discussions. As everyone who has a child with one or more disabilities knows, it all starts and ends with the family. The issues that exist within families, cultural and otherwise, drive the process of identifying, soliciting, and participating in assistive technology (AT) services. We're anxious to hear your stories, your observations, and your questions, whether from the perspective of an education and/or AT professional, as a parent, or as both.

On an administrative note, technical problems have kept us from posting Tom Nurse's photo until Tuesday, January 3rd. At that time, we'll also be able to make the resource links "hot". Thanks for your patience.

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- **Welcome Participants** by **Phil Parette** on Jan 03, 2005
Happy New Year to each of you, and welcome to this forum on culture and diversity, and their relationship to AT and disability. My colleague, Tom Nurse, and I will be interacting with you during the month of January and look forward to your comments and concerns. We will be checking in on a daily basis, and commenting as appropriate, and encourage each of you to share your experiences and perspectives in this engaged learning community forum.

Both Tom and I bring diverse perspectives to this discussion, and we hope that the richness of our conversations with you in the days ahead will broaden our respective understandings

of culture and diversity in the AT field.

Most recently, my colleagues and I have begun exploring Millennial generation characteristics (i.e., those students born after 1978--1982), and who have grown up in a technology rich world. Their understanding of technology (and expectations/preferences for its use) are very different from Baby Boomers and Gen Xers who may be working with these students in public school settings. What we don't know is what students with disabilities expect/prefer in public school settings with regard to technologies used, and we are currently exploring use patterns among students with mild disabilities.

My scholarly work in the past 12 or so years has addressed culturally and linguistically diverse factors as well as family issues and how these factors/issues impact AT decision-making. As you may already be aware, there has been a limited amount of work in this area, so we really look forward to hearing about your insights and experiences.

- o **Re:Welcome Participants by annette cerreta** on Jan 04, 2005
As a AT professional born a little post-baby boom, I have to admit that I am much less comfortable learning and using technology devices than the children that I work with. I see too, that the student's parents also have varying degrees of comfort using technology.

I find that I tend to demonstrate assistive technology that is easy for me to use, but I think many students could and would prefer the more sophisticated technologies. I also recognize that the "cool" factor of mainstream technology versus specialized technology is another big issue. Many students I work would much rather use a laptop or PDA than a portable notetaker any day.

Are these generational differences fairly typical of the students, professionals, and families you have studied?

- **Re:Welcome Participants by Tom Nurse** on Jan 05, 2005
Great point: We all can learn so much from this new generation of kids who are growing up in this PS2, iPod, computer, cable & internet connected digital age! My 10 year old son isn't amazed by the internet, like his Dad, he just uses it to beat his PlayStation2 games! I'm finally learning to ask both my kids how to fix it and more often than not they'll do it! A little humbling, but a whole lot less frustrating!

There are plenty of kids in our elementary, middle and high schools that already are high tech power users and we can learn so much from them. Today many of public school system are having a hard time keeping up with this generation. We need to let the kids teach us sometimes!

The "cool stuff" gets used and the "uncool" sits in the closet. Using mainstream technology help not only connect our kids, it connects them to their own generation's digital "mainstream." I encourage folks to have students help other students and teachers to get "connected"

I'm very confident that the combination of AT and mainstream tech is creating a generation that have so many more options than any before them, these are exciting times. Sometimes the teachers become the taught, enjoy.

Thanks for sharing, Tom

- **Re:Welcome Participants by KimM** on Jan 04, 2005
Although it may be true that age factors into technology expectations and preferences, I believe personality and finances also play a key role in whether or not technology is embraced and used to its fullest potential.

For instance although I'm a baby boomer (born in the early 50s) I have never feared change and have always embraced technological changes as they materialized. A born geek. I inherited that from my dad who at the age of 60 bought his first computer in the early 1980s. Today the older members of my extended family (who are in their seventies and eighties) use computers and other high tech gadgets on a daily basis. To them change and learning something new is what keeps them young.

In contrast I can't tell you how often I meet [professionally] teenagers and young adults who know next to nothing about computers and other technological wonders of our modern society. Two big factors seem to be the inability to purchase these items and also the influence of adults in their life (parents, teachers) to teach them how to use the equipment.

Providing my LD son with a home computer, PDA and other technology made a huge difference in how he approached school, work assignments, etc. It also did wonders for his self-esteem...classmates and teachers come to him for help. He even taught a class on how to use PowerPoint.

I look forward to joining this discussion and hearing what others have to say.

- **Re:Welcome Participants by Phil Parette** on Jan 04, 2005
Annette, I agree whole-heartedly that we cannot make generalizations that fit all people. You are certainly an excellent example of how broad characteristics that have been reported for specific generations may not fit. Within every generation there is a broad spectrum of individuals having varying aptitudes, experiences, values, and, I agree, access issues related to finances. However, I think you will agree that students in this latest generation have been surrounded by technology to a greater degree than any previous generation. For example, many kids today have never been around dial tone phones and computers and VCRs have always been a part of their lives. Many such technologies that today's students expect and use frequently were not available to many of us when we were younger, and we had to learn later on how they were used in our lives. That is, we integrated these technologies into our lives and still had frames of reference (i.e., no technologies or dated ones that were available in our developmental years) that children do not have, since technology has always been a part of their lives. This is a fundamental difference that I think many of today's teachers don't understand, and it is truly a cultural distinction.
- **Re:Welcome Participants by Tom Nurse** on Jan 05, 2005
Annette, without a doubt there are huge gaps in the comfort level across all generations so it is critical that we let those who are comfortable help lead the way. Tom

- **Where do you start?** by **Sari** on Jan 04, 2005

Good morning all. My question is a basic one. Let's say you're dealing with a family with low English proficiency. They recently learn about their child's disability. They have no prior information about the disability, so everything is new to them. I understand that it wouldn't be meaningful to ask them "What AT would you like to have for your child?" But I'm wondering how meaningful it is to even ask them "What are your goals for your child?" as they probably have no idea what's possible, given the new disability diagnosis. How do you help them identify reasonable goals, so that you can then explore the right AT to meet those goals? As educators and therapists, we can't be knowledgeable about every disability, so how do we work with this family? I hope the question makes sense. Thanks for any insights you can share.

- **Re:Where do you start?** by **KimM** on Jan 04, 2005

I have worked with a number of families with minimal English proficiency. Some were extremely educated and held high paying jobs in their native country. The approach I took with these families was obviously different from those with limited education and life experiences. What I found is that the language barrier isn't as difficult a barrier to overcome as perhaps lack of education, life experiences and cultural beliefs. For instance, families that were proficient computer users in their native land continue to be so once they relocate here. They use the Internet (either at home, public library, etc.) to obtain information—often in their native language. At least that has been my experience so far.

- **Re:Where do you start?** by **Sari** on Jan 04, 2005

Having worked with many non-native English speakers, I didn't mean to paint everyone with a broad brush. I agree that it's more an issue of education than of language (although there's sometimes a correlation). I was speaking about the group I work most closely with. At least half of the mothers did not go past 8th grade in their home countries. The statistics for the fathers are a little better, but a significant percentage did not finish high school. It's often not an issue of intelligence, either, but the lack of an education seems to result in a lack of self-confidence. A lack of self-confidence affects their ability to advocate forcefully for their children. Their strongest tool I think is how deeply they care about their children. It's been amazing to see a few very timid mothers work past their fear of school administrators and others in order to get services for their children.

- **Re:Where do you start?** by **Phil Parette** on Jan 04, 2005

Sari, it might help to understand the cultural backgrounds of the families that you are describing. What we have found is that within certain cultural groups, at least first generation immigrants, there is the expectation that education professionals are the experts and that even though a family may not agree with professionally held perspectives, the family will not openly disagree as a sign of respect for the role in society held by the education professional. As a result, we may see head nodding in conferences and other gestures that suggest acceptance of professionally held perspectives, and then family members do something entirely different. I agree with you that among non-native english speakers, many persons who are better educated may be more apt to become strong advocates for their children once they understand school processes, legal protections, etc., though I have also seen family members who were less well

educated demonstrate strengths as advocates. This is so heavily influenced by past experiences (family and ethnic values, experiences with school personnel, perceptions of education, child-rearing, disability, and many other factors).

- **Re:Where do you start?** by **Phil Parette** on Jan 04, 2005
Kim, I agree that such behaviors may be exhibited by many families who may be comfortable with technology, but many differences across families with minimal English proficiency will also be demonstrated based on the extent of acculturation that has occurred. There are typically four responses to acculturation (or the degree to which families become part of the mainstream culture), that includes assimilation, integration, separation, and marginalization. Assimilation occurs to the extent that a person desires contact with the dominant culture while not necessarily maintaining an identity with his/her native culture. This may be a typical expectation of many AT decision-making teams in public school settings at the present time, i.e., that both users and families are assimilated into the prevalent AT culture, and thus should be accepting of AT recommendations made and the expected implementation of AT solutions in the home setting. Research has demonstrated that some cultural groups prefer not to be assimilated in varying aspects of American society. The extent to which families from diverse cultural backgrounds may reasonably be anticipated to be accepting of AT is relatively unknown at this juncture in time, though efforts have been made to identify both user and service provider goals and preferences have been noted in the literature.

Integration occurs when persons who desire to maintain their cultural identity also desire a high level of interaction with the dominant culture. Historically, many immigrants tend to be more concerned than second generation family members about fitting into the dominant culture vs. maintenance of their cultural roots, even though immigrants may practice their own native culture at home. With regard to AT service delivery, this would suggest that families may accept some AT strategies and reject others depending on the environmental context in which the strategies are to be implemented. Although first generation migrants (who have immigrated to the new society) are expected to change their values to a certain extent, second generation migrants (as a result of being raised in the new country) are expected to differ from traditional values to a greater extent. However, contingent on influential variables, a relatively high degree of value maintenance may also be expected in the second generation.

Separation occurs with low levels of interaction with the dominant culture (and related microcultural groups) while desiring a close connection with and affirmation of their native culture. Separation involves resistance to the dominant culture and its value systems and attempts to change the environment where the person lives. In the U.S., this is difficult to achieve as it would require creation of an environment where the original culture dominates in the midst of powerful dominant cultural forces including established standards for living in a democratic, consumer-oriented society, a range of individual freedoms within the culture, the influence of friends within the community, a competitive economy, and influence of the media. However, it does exist in, for example, members of the Deaf Culture, where deaf individuals are expected to communicate via American Sign Language and not through oral communication. Members of the Deaf Culture are encouraged to reject cochlear implants and technology use that would make it appear that

the person "is trying not to be Deaf".

Marginalization occurs when persons choose not to identify with either their native cultures or the dominant culture (e.g. in case of enforced cultural loss combined with enforced segregation). Elements of the culture that somehow survive every attempt at being destroyed are systematically belittled or denigrated. Indigenous practices may be labeled as pagan religions, primitive art, and folk medicinal practice, with persons from the dominant culture conceding that such belief systems exist but are viewed as being inferior to the prevailing mainstream culture (e.g., what occurred in the U.S. with indigenous Native American tribes). In the U.S., there is a long history of persons with disabilities being marginalized. With regard to AT usage, there has been a historical precedent in the U.S. to develop assistive technologies employing development philosophies that plague computer-based systems, in that these systems do not consider the needs and capabilities of persons with disabilities. Similarly, rejection (or failure to acknowledge) of important cultural values held by family members may potentially result in unwillingness to participate in AT decision-making processes.

- **Re:Where do you start?** by **Cathy Varner** on Jan 06, 2005
As the hearing parent of a deaf child growing up in a hearing family in a predominantly hearing community, I struggle with these cultural issues all the time. My child is completely comfortable with technology and enjoys using it. He is also a child who struggles with oral communication so as not to be excluded in family and community situations when I cannot solely be his interpreter. There are so many new technologies being developed that would aid in these situations, but they are often costly and others do not want the expense even if we were to make the investment on our end. I work in an AT office in the school my son attends and substitute teach in the HI classrooms. I see many children whose parents are not connected to these issues and I fear what will happen with these kids if they do not learn of the technology that is available. Also, I have become acquainted with a great many deaf people in the last 10 years. Those who are "deaf" use a TTY and perhaps email to communicate, but most rely on the telephone relay system. Those who are "oral-deaf" utilize the wireless technologies and are very comfortable communicating with the "hearing world" in whatever way necessary. The "deaf" people often seem offended by the use of these technologies, as if use will somehow take away ASL as a communication tool. I am trying to expose my child to all kinds of technology, even the ones we can't yet afford, so that he knows what is available and will be comfortable using it if he chooses. I worry that As for the usefulness of the wireless technology, you have to experience it being used by the driver of a car leaving downtown Chicago in rush hour traffic!! I thought I was going to die, but she successfully navigated not only the car, but her email as well.
- **Re:Where do you start?** by **Tom Nurse** on Jan 05, 2005
I would suggest asking what would be important for them to have their child be able to do that they may not be able to do now. For example: If a child is non-verbal, if you asked the parent "Would it be important if you child could tell you what she want?" The answer may be an excited "Yes", but if you just asked for the "goal" you might get the "I don't know" answer.

My point is work out from what's important to the family first. By asking the question above you've identified that effective communication is important to them and now the team can begin to explore "How" the child could accomplish that "goal".

Tom

- **Re:Where do you start?** by **rebeccap** on Jan 06, 2005
I'm happy to be a part of this discussion.

I think working backwards like Tom suggested is a good idea. I do it with everyone I work with since coming up with a goal out of thin air can be hard (especially if it's very long term). Once parents are able to say they want their child to be able to talk to them, then you can begin to talk to/show them how that can be done. A lot of it is working with the parents to at least gain some comfort around the AT. I think it's also important to show them what particular use any given AT item holds in getting their child to be able to communicate, and that it won't happen right away.

- **Re:Where do you start?** by **rebeccap** on Jan 06, 2005
It seems to me that one of the other key points you are making is that the parents are also trying to get used to a new diagnosis. That in itself is extremely hard, and, I think, is made harder by any kind of language barrier. You have to work on those emotions before you can begin to throw AT options at them.

- **Language barrier/perceptions of disability** by **Phil Parette** on Jan 07, 2005

And this is made even more difficult when we as education professionals don't understand the perception/s of disability held by family members across cultural groups. For example, we have had some some Afriacan American mothers tell us that terms such a 'mental retardation' have very negative connotations, and families are less inclined to accept such diagnoses. As one Mom told us, "It's OK to say my child has problems learning, and that she doesn't have a lot of friends, but don't tell me my child has MR--my child is a person." It is so very easy for many us to use terminology when discussing children with disabilities with family members, and not understand their perspective of disability and level of acceptance, values regarding the responsibility of the family to care for their children, and the perceived role of education professionals in delivering education services to their children. There is also that factor of family expectations in the absence of a knowledge base/understanding of the demands of AT implementation. For example, many families have told us that they have expectations for immediate benefitof the AT to their child. If an AAC device is prvided, the child will be able to talk and use it successfully across environmental settings. Obviously, such an expectation will often be unrealistic given the training and supports required for high-tech devices to be effectively used, and without the necessary supports and services in place early on the AT implementation process, the likelihood of AT abandonment increases markedly.

- **Re:Language barrier/perceptions of disability** by **Lynne Tamor** on Jan 27, 2005

As the parent of a child with severe cognitive impairments (among other issues) who is "nonverbal", I have struggled for years to get school people to invest long-term ins alternative communication avenues, including AAC, pictures, and sign.

It's interesting to see AT abandonment blamed on parental impatience and expectation of immediate and dramatic gains in communication. My experience is the opposite -- it is the school staff, particularly the paraprofessional staff -- who expect instant results. They have little or no understanding of the underlying learning required of my child to access and use these approaches, so they neither teach him directly nor allow him sufficient opportunity to explore on their own. They also have little understanding of the communication needs of a child with disability -- they don't see communication as a social activity but as a skill to be demonstrated on demand (and at no other time). When all this does not happen instantly, they conclude the approach "does not work" and stop trying to use it at all.

I think the discussion of parents and "professionals" entirely ignores the critical middle group -- the paraprofessionals, classroom aides, therapy assistant, etc. who are frequently charged with implementation but who have the motivation and skills of neither the parents nor the professionals.

- **Welcome and please join in** by **Tom Nurse** on Jan 04, 2005

Happy New Year to all of you. It is such a pleasure to join Phil as we explore approaches to involving families in a respectful and meaningful manner when working with professionals. Both of us honor the importance of "family centeredness" and we look forward to engaging you for the next month.

I would like to start by posing the follow questions:

For professionals: What approaches have you used to generate meaningful, engaged family involvement in the AT process.

For families and individuals with disabilities: What approaches have been most helpful in building trust and engagement for you in the AT process?

Again, I look forward to sharing ideas and perspectives over the next month.

- **Re:Welcome and please join in** by **Wendy** on Jan 04, 2005

Well, as a mom of a son with LD it has taken many years to gain trust with the AT process. It is frustrating to have your child go through an AT evaluation and then have AT issues and problems which prevent him from actually being able to use it in the classroom. I have found that the best way to gain trust with the process is to keep the lines of communication open between parents and professionals. Even when there are issues that are hard to discuss, it's helpful to just put that issue straight out on the table.

- **Putting issue on table** by **Enter name here** on Jan 05, 2005

I agree with the importance of openness, and putting issues on the table, though sometimes education professionals are insensitive to family communication styles, and are very direct (e.g., fail to develop the trust that is so very important to any relationship with families--and trust can be developed in many ways, such as being sensitive to social time BEFORE a meeting, such as snacks and non-business conversations [we have found this to be true with many Hispanic and Asian families who prefer the social

element being embedded in family-education meetings]. They may be very time conscious, e.g., starting meetings at a scheduled time, not being sensitive to family transportation issues) and communicate lack of respect/acknowledgment of family values that may be quite different from that of the education professionals. I think that many families will need to be supported to develop the ability to 'put things on the table' as such experiences may not be within their repertoire of past experiences or cultural upbringing.

- o **Re:Welcome and please join in** by **KimM** on Jan 04, 2005

On a professional level (I'm an AT Resource Consultant) I include parents and/or the caregiver in the assessment process. If the device will require a high degree of training, support and maintenance I make sure that a family member or caregiver is aware of this and comfortable assuming this role. In the past I've requested and received funding from a stakeholder not only to provide training for the consumer but also for his mother so that she would be able to provide ongoing support.

- **Re:Welcome and please join in** by **Phil Parette** on Jan 04, 2005

Kim:

One of the things that we have to keep in mind when we make families aware of what to expect (e.g., training, maintenance, implementation) is to not make the assumption that once a family member gets training, that he/she will be able to teach their child. Having talked with many family members around the country about the issue of training and how this training is translated into practice with their children, a frequently expressed concern is that we forget that families are not trained to be teachers, and yet we many times expect families to attend workshops, get hands-on, etc., and then be able to teach their children how to use devices. We know that this is a flawed assumption for many families that we may be working with, calling attention to the need for a cadre of supports to ensure the effective implementation of the AT and minimize the potential for abandonment.

- **Re:Welcome and please join in** by **KimM** on Jan 04, 2005

I agree! Sorry my post was not as clear as it should have been. The training provided was in addition to training the consumer and training sessions were done separately. The main purpose of the parent's training was to help her become familiar with the device and comfortable supporting her child during use. In this particular instance it worked for the child and parent. There are always so many variables...each situation is unique.

Another problem is that family members don't always respond to training from a relative the same way they would with training from a teacher/non-relative. As the parent of an LD child there have been times when I was totally unable to "teach" my son...and then there have been times when "training" was wildly successful.

So I'm back to every situation is unique!

- **Re:Welcome and please join in** by **junebug_505** on Jan 05, 2005

I know that it has been difficult just finding the right type of AT for my son because all children are unique. Also, the AT must be something that the family can grasp the concept of using or it is totally useless.

The worst thing of all is that our schools seem to put parents off alot. They seem to think that our kids have all of the time in the world ...they don't! The earlier the AT is started, the sooner they can become more self-reliant.

- **Re:Welcome and please join in** by **Tom Nurse** on Jan 05, 2005
I agree that sometimes I need to be "dad" and not the AT expert but, if I didn't work at it as hard as I do, many opportunities would have been lost.

I still need and expect help because it's takes a "team" to make it work in all the different enviroments that kids use technology. And also my 13 year old daughter doesn't always want to learn form her dad either!

Tom

- **Re:Welcome and please join in** by **Joy** on Jan 07, 2005
Great questions, Tom. I look forward to seeing the replies. :)

-
- **Family/professional expectations** by **Enter name here** on Jan 05, 2005
In what ways have your AT expectations been different from those of professionals with whom you have worked? For example, we have found that education professionals sometimes feel that family members should be more 'realistic' regarding decision-making about and implmentation of AT. I have heard both teachers, related service personnel, and vendors comment that families need to assume more responsibility for training, learning about devices, maintenance, etc. without suggesting specific strategies for supporting families to become more involved successfully. Similarly, I have often heard families discuss the fact that education professionals have no understanding of the realities of home life and the difficulties confronted by many families in implementing AT in meaningful ways. This 'disconnect' or 'dissonance' seems to be very real in many decision-making situations, and I was wondering to what extent some of you have experienced this in working with teams!

- **Re:Family/professional expectations** by **Tom Nurse** on Jan 05, 2005
I have felt and experienced both these perspectives. I would love it if we had an IEP/AT Planning session at our home so it was more about my daughter in her home environment AND school environment but that hasn't happened. I think this would help folks understand more about "home life" and some of the competing pressures for my very limited time. I have also been challenged by what is sometimes termed as "unrealistic" but I perceive to be "we won't pay for it, so we won't talk about it" The money issue can really get in the way of open collaborative discussion.

Tom

- **Re:Family/professional expectations** by **KC St Paul** on Jan 05, 2005
I have had the opposite problem. Speaking as a parent, the coordination of AT across home and school is the biggest challenge for us. In particular there seems to be low accountability for classroom use of AT. Compound this with peer pressure for the child and you've got little if no AT usage in the classroom, even though home use

is high. The problem with teams is accountability. The intentions may be excellent but there are few consequences if the IEP goals are not met. This places the parent in the role of monitor and badgerer. A lot of energy expended with few results. How can we improve this aspect of team management with respect to AT - a broad question, I know.

- **Re:Family/professional expectations--outcomes** by **Phil Parette** on Jan 06, 2005

The issue here is outcomes. Given the impetus of NCLB (achievement) and IDEA (AT consideration and access to the general education curriculum), schools are confronted with the very real issue of identifying appropriate outcomes that are linked to AT service delivery. As you may know there are three federal projects currently involved in helping us identify outcomes--the National Assistive Technology Research Institute (NATRI) at the University of Kentucky, the Assistive Technology Outcomes Measurement System (ATOMS), and the Consortium of Assistive Technology Outcomes Research (CATOR). Each project is approaching the question of outcomes from different perspectives and it may be several years before we have clear guidance on what we should be doing. What we have acknowledged is that outcomes include consideration of: (a) the extent of AT integration into academic, vocational or life skills instruction, (b) the changes in student performance, (c) the extent and nature of participation with typical peers, (d) the participation and performance in state and district assessments, (e) quality of life, and (f) the changes in intensity of supports needed by the student to achieve independent. K-12 student outcomes specifically related to AT acceptance or abandonment may include determining: (a) the factors in the decision making process that lead to a specific AT device or service, (b) extent of device usage, (c) cultural and familial expectations and assumptions about AT and acceptance by others, and (d) degree to which training related to the AT occur. Measures such as these can be modified and refined when recommendations regarding nationally recognized outcomes indicators are disseminated by NATRI, ATOMS, and CATOR projects in the future.

- **Re:Family/professional expectations** by **Roger Steinberg** on Jan 06, 2005

Hi. I'm going to zero in on a couple of things from my perspective as an AT vendor and my background as an ESE educator and AT specialist.

The lack of coordination of AT across home and school is a huge issue. I also think it plays directly into the low accountability and peer pressure. AT is seen as different, by its very definition, from instructional technology or technology in general. In reality, it is not different. Everyone uses forms of technology to make their life easier. I don't like to get into the labeling debate, but by its very name AT can cause issues.

My push has been towards Universal Design for Learning (UDL). Simply put, whatever is out there is designed for the use of anyone who needs to access information or the learning environment. In my experience, and in my current position, I have seen that properly designed tools can be used by individuals to meet their individual needs. This includes those on both ends of the spectrum.

I see this somewhat as a problem of trying to utilize twenty assistive technologies for twenty students. From experience, I can understand why some educators struggle to implement at the level we would all like to see.

- **Re:Family/professional expectations by Phil Parette** on Jan 06, 2005
 I agree w/ the importance of UDL, but trying to design devices that meet the needs of many, often results in upscaling. Our conversations with vendors around the country have suggested that trying to address the needs of too many (and thus creating a marketable product for a broad market) can result in too many features being built in that becomes frustrating for families to deal with. Take, for example, microwave ovens as an extreme example. Most have more features than the average person needs. A typical DVD player w/ remote may be confusing to many who simply want to insert a CD and press a button to play. Similarly, many AT devices have lots of add-on features that can result in parents (and teachers) being turned off, even though these features may be desirable for some.

- **Re:Family/professional expectations by Roger Steinberg** on Jan 06, 2005
 Phil-I agree that my microwave, my DVD player, and even my computer have more features than I can ever utilize. However, they are there if and when I need them. The key is in the fact that you cannot learn all there is to know about them in one sitting. You learn new skills, as they become necessary, but you know they are there when you need them all in one place at one time. I guess in the end drawing upon my teaching experience that learning an entirely new tool each time becomes overwhelming and detrimental. If I can learn the basics, while knowing that other features will be there when/if I need them, then I'm ready to go. I can pick up all the finer features going forward without starting from scratch. -Roger

- **Re:Family/professional expectations by Phil Parette** on Jan 12, 2005
 Roger:

 I agree with you in part--even if many people know there are additional features there to help them, and ready in principle, many factors can work against them taking advantage of those features, including the time commitment, the notion of learning 'one more thing', lack of supports to acquire and maintain the skill (e.g., training, someone to read/explain the instructions, someone to talk w/ to problem solve if complications/obstacles arise, etc.). Many people are certainly willing and able to accept new learning, but only if certain supports are present, and many others will not be depending on their life circumstances. Families are often resistive to taking on 'one more responsibility' w/ regard to learning about AT given the immense demands placed on them in their daily lives.

- **Re:Family/professional expectations by Janet Peters** on Jan 20, 2005
 Most of the families we see in our Center are the driving force behind A.T. use for their child at home and school. They are motivated and usually

don't see it as "one more thing" but rather a way open possibilities.

That said, we are a Technology Center, so the parents we see have the motivation, time, talent, and perspective to learn about technology options. It really is the whole IEP team's responsibility to fully consider A.T. options and it's the professionals that must implement the A.T. to reach the educational objectives. As with all services for children, the goal is a good education, whether or not the parents are the "push".

- **Re:Family/professional expectations** by **Tom Nurse** on Jan 25, 2005
Partnerships are keys, but ultimately it's the families that have the greatest vested interest but may not start out with much formal training. Let's use the passion and love of families combined with the knowledge of professionals to help kids "increase, maintain, or improve their functional capabilities"

Tom

- **Re:Family/professional expectations** by **Tom Nurse** on Jan 06, 2005
Well said Roger and thank you for joining in the discussion.
Tom

- **Re:Family/professional expectations--outcomes** by **Phil Parette** on Jan 06, 2005
The issue here is outcomes. Given the impetus of NCLB (achievement) and IDEA (AT consideration and access to the general education curriculum), schools are confronted with the very real issue of identifying appropriate outcomes that are linked to AT service delivery. As you may know there are three federal projects currently involved in helping us identify outcomes--the National Assistive Technology Research Institute (NATRI) at the University of Kentucky, the Assistive Technology Outcomes Measurement System (ATOMS), and the Consortium of Assistive Technology Outcomes Research (CATOR). Each project is approaching the question of outcomes from different perspectives and it may be several years before we have clear guidance on what we should be doing. What we have acknowledged is that outcomes include consideration of: (a) the extent of AT integration into academic, vocational or life skills instruction, (b) the changes in student performance, (c) the extent and nature of participation with typical peers, (d) the participation and performance in state and district assessments, (e) quality of life, and (f) the changes in intensity of supports needed by the student to achieve independence. K-12 student outcomes specifically related to AT

acceptance or abandonment may include determining: (a) the factors in the decision making process that lead to a specific AT device or service, (b) extent of device usage, (c) cultural and familial expectations and assumptions about AT and acceptance by others, and (d) degree to which training related to the AT occur. Measures such as these can be modified and refined when recommendations regarding nationally recognized outcomes indicators are disseminated by NATRI, ATOMS, and CATOR projects in the future.

- **Re:Family/professional expectations** by **janet** on Jan 05, 2005
I am also wondering how much professionals should expect by way of technical aptitude and interest from parents (who may already be overwhelmed).
 - **Re:Family/professional expectations** by **Phil Parette** on Jan 06, 2005
This can only be determined by asking very carefully constructed questions re: the realities of AT implementation and what will be expected. If such questioning reveals that families may be hesitant, or unable to meet such expectations, then additional AT services may be warranted to facilitate effective implementation.
 - **Family/professional expectations** by **Phil Parette** on Jan 07, 2005
Expectations should be tempered by understanding of what families prefer, their capacity and willingness to participate, as well as their routines and value systems. I think the short answer is to do whatever is necessary to understand the priorities, resources, and supports a family brings and then to moderate professional expectations based on the realities of what families bring to the decision-making table and what they can reasonably do. All too often I have heard vendors and education professionals speak in terms of what they think families should be doing w/ regard to AT decision-making and implementation, while virtually ignoring the realities of daily life, the family's priorities, and other critical dimensions of the family that have powerful influences on what families can and will (or will not) do. With regard to technical aptitude, one of the discussants in this forum noted that s/he had great aptitude and willingness to use AT in the family setting, though many others will not have such aptitude, and it essentially comes down to an individual assessment of each family. We did a study some years back and found that there is a continuum of interest levels/willingness to participate demonstrated by families, ranging from little (or no) interest in AT decision-making/implementation to high interest and involvement.
- **Re:Family/professional expectations** by **Tom Nurse** on Jan 06, 2005
The biggest difference I have found between school and home AT vision is that the school vision can be very limited (I feel because of money fears and "educationally relevant" perspective) compared to a much broader vision for independence, internet access, and gaining life access from a family perspective.

For example, I rarely see that powered mobility has been recommended by the early intervention system or school because if they bring it up then they may be required to fund it. But clearly independent mobility can be critical to developing self-determination, increasing living skills, community participation options, and employment.

On the other hand, because of a caring professional (a PT) gave me an article titled "The Relationship Between Powered Mobility and Early Learning in Young Children with Physical Disabilities" by Richard and Phyllis Neeley back in 1993, I was inspired by the main point of the article. The main point, as I saw it was, if you give a young

child the opportunity to experience typical developmental experiences, they have greater opportunities to gain that developmental skill.

The example in the article was looking at a typical toddler as they crawl around the living room floor and they come to the table leg, bump their head, they will cry for help and if they aren't picked up they will eventually figure out that by moving around the leg they can move on. If a child can't crawl then they don't have the opportunity to analyze the problem, explore options, make a choice and move on. This simple example also discussed how this experience is also the foundation for early math brain connections in areas of spatial awareness, problem analysis and choice making.

As a result of this increased knowledge, and the fact that we had private insurance, and after SIX denials, my daughter did receive her first power chair when she was 27 months old!

Some of these developmental windows are only open for certain periods of time, or are at least far harder to learn later, so they decisions about AT can have profound long term impact on development and life options. I will always be grateful for being given that article and I also know that if I hadn't taken no/denial for an answer my daughter would be a much different person than she is today!

Tom

- **Student preferences for AT** by **Phil Parette** on Jan 07, 2005

In returning to some earlier thoughts about student preferences for AT, have any of you observed whether students have articulated 'preferences' for specific types of AT that are 'cool' and which are used by peers (e.g., email, MP3, hand-held recorders, etc.) vs. more traditional AT devices that are often used (and recommended) by education professionals (e.g., tape player/books on tape vs. MP3). Sometimes these devices draw less attention to themselves and lend themselves to greater acceptance of students with mild disabilities by their peers?

- **Re:Student preferences for AT** by **ac** on Jan 07, 2005

As an AT consultant, I have observed a strong preference for mainstream technology versus more traditional AT i.e. laptop vs. portable notetaker in many students with mild disabilities. This is especially true of middle school and high school students who seem to be more highly concerned about what their peers think.

- **Re:Student preferences for AT** by **nicat** on Jan 07, 2005

At our technology center, we too have students who are only interested in laptops instead of the much more portable and DURABLE AlphaSmart. Of course with \$\$\$\$\$ and school districts involved, we have to make unpopular choices for students sometimes. A different problem we encounter is parents who are requesting laptops for their elementary-age and sometimes pre-school age children. Then there are the parents who want the \$8000 aug comm device for their 4 and 5 year olds. It's difficult explaining to parents that sometimes low tech is better to start and the child will grow into the higher tech equipment when they are better able to handle the responsibility of those expensive devices. Is this peer pressure of a sort or do parents just want the best because they hope it will work some sort of miracle? I am also

a parent of a child with a disability so I understand the emotional aspects of these situations.

- **Cultural reciprocity and child/family preferences by Phil Parette** on Jan 07, 2005

I think it's a combination of both. As a society we are increasingly enamored with the high tech possibilities that are used all around us, and yet those very devices are often upscaled to the extent that they are both costly (due to lots of add-on features to meet the needs of many) and more complex to use. For many families, it goes back to that issue of having candid conversations in which the realities of using/implementing devices are fully explained in the context of understanding what family expectations are, the realities of their lifestyles and routines, and what they are willing (and capable) of doing.

These conversations also have to clarify what professional expectations are, and what schools are willing to do. Maya Kalyanpur and Beth Harry (experts in cultural issues and disability) suggested a four-step process for professionals to develop a "posture of cultural reciprocity" that reflects sensitivity to family/cultural needs.

In Step 1, the team would identify the cultural values embedded in the professional's interpretation of the family and/or student's AT needs or in the recommendation for service. This step essentially requires the professional to ask "why" a specific perception is held. For example, an Asian student with a physical disability is reticent to make eye contact with and respond verbally when addressed by adults. Even when efforts are made by adults to "build rapport," the student still displays a perceived inability or unwillingness to demonstrate these important developmental skills. At this point, the professional should ask him/herself why these skills are deemed important. If the professional is from a Euro-American cultural background, the perception may simply be that eye contact and verbally responding to adult communication initiations are important in both the classroom and daily interactions with others.

In the second step, the team decides whether the family recognizes and values these assumptions, and if not, how their perception differs from that of the professional. In this second step, the family is approached and the professional presents his or her perception of the "issue" to the family. This become problematic in working with families across cultures, as some families may require an interpreter for interactions with school personnel to occur. When interpreters are used, some families are uncomfortable discussing family matters in the presence of others. They may also feel that probing questions from professionals are intrusive.

Once appropriate contact is made with the family, the professionally held perception should be presented in a culturally sensitive way to the family for their consideration and response. In this example, the family may reveal that they see nothing wrong with the child's behaviors and that such behavior is typical of children in Asian family settings.

In the third step, the team acknowledges and gives specific respect to

any cultural differences identified, and fully explaining the cultural basis of the professional assumptions. In this phase, the professionals should explain to the family their assumptions and beliefs and how they are different. In this example, the professional would clarify that eye contact is important during communication interactions, and that verbal responses to adult communicative initiations are important. Further, the professional would note that failure to demonstrate these behaviors leads you to believe that the student has not heard what has been said to him or her, and that disrespect is communicated by not making eye contact. The professional must also acknowledge that the family feels that (a) lack of eye contact communicates deference to and respect for authority figures, and that (b) children are taught to listen and not draw attention to themselves by responding to adults.

In the final step, the team determines the most effective way to adapt professional interpretations or recommendations to the value system of the family. While this approach may seem a bit complex, I think it is central to better understanding the needs/positions of families and facilitating more effective partnerships with education professionals.

- **Re:Student preferences for AT by Tom Nurse** on Jan 08, 2005
Is it only that the laptop is "cool" or is it also that the software and hardware can allow for far more productivity and connectiveness?

For example, by looking at a typical 3rd grader's academic expectations and then asking: Is there any way that the student with a disability 'could' do the expectation utilizing AT?

Basic AT is a great place to start implementation, but as quickly as possible it is important to further expand access to AT so as to help the student obtain age appropriate literacy and independent exploration skills. Alpha Smarts are excellent writing tools but even far more powerful when the text is imported in to a computer word processor with a full size screen for further refinement and printing.

Many times different levels of AT are needed for the same child, depending on the task, the skill level, the environments and the ease of use. Figuring out what works best for a variety of different activities takes time, expertise, collaboration, money and some real creative determination, but the pay off can be huge!

The upfront investment in higher end technology, such as laptops & ACC devices, earlier in the student's school years can payoff by helping that student keep connected to the same subjects and expectations as his or her peers. Also many times the student will need years of training and opportunities to gain the skills necessary to fully utilize the technology, so the longer we can train and build success, the better the outcomes can be for a student.

So start simple but always aim high!

Tom Nurse

- **Re:Student preferences for AT by Phil Parette** on Jan 10, 2005
Tom, I agree with your analysis here. As an example of different levels of AT being needed, we recently worked with a middle school age student with learning disabilities. The student was only able to generate a 2-sentence story using handwriting. The AT team decided that he could benefit from Write:OutLoud, and after a short time the student's written expression increased by several sentences. However, in talking with the student the team soon realized that he was able to generate lengthier stories 'in his head', but could not get the sentences on paper as efficiently, even using the talking word processor. A hand-held recorder was provided to the student so he could express his story, and then play back the sentences while using the talking word processor. Guess what? His sentence production increased to several paragraphs (vs. a few sentences) by using a combination of devices that were relatively low cost.
- **Re:Student preferences for AT by Joan** on Jan 26, 2005
And- depending on what the task is, in what setting, different strategies will be appropriate. Phil- thanks for the story. I like to have examples of using multiple strategies to complete different components of a task.
I have been telling the story of my brother, who had a degenerative disease. As his speech became harder to understand, we obtained a high end AAC device, which he used with efficacy. However, in his kitchen, we put a series of single switch, single message devices so he could yell at his dogs when they got into the garbage. The high end device would not have been at all useful in that setting- by the time he got to the message, the dog would have been gone.

- **Augmentative Communication devices in languages other than English by Deborah Leuchovius** on Jan 07, 2005

My young adult son is an augmentative communication user who has surprised everyone, including myself, with developing a strong interest and facility in other languages. (He is not completely nonverbal, but his vocal cords are paralyzed and is limited in his ability to speak his thoughts.)

In his transition planning we have identified his interest in languages and other cultures as a strength that should be explored and supported as it can open a whole range of employment opportunities.

Our difficulty in regards to AT is that we have not been able to find augmentative communication options that provide a comparable level of communication capacity in languages other than English. The Dynavox system has the most Spanish language capacity however, it was clearly developed by non-Spanish speakers and the pronunciation is programmed based on English pronunciation and the the translations are sometimes off the wall. For example, selecting a picture of a "seal" (the animal) prompts the Spanish word for "seal" as in State seal/stamp of approval....

While this is frustrating for a Spanish language student who is also an augmentative communication user, I can only imagine how primarily non-English-speaking families are limited by the lack of options for youth who would otherwise be good candidates for augmentative communication. Augmentative communication has opened up new

opportunities of expression for my son and has built his confidence by allowing him to demonstrate his humor, love of music, and a very sophisticated command of English. It's been a joyful discovery for me as his mother as well.

It doesn't surprise me that a classmate of my son's whose parents speak only Hmong have not promoted their son's use of a similar AT device (-- completely aside from the issue of trying to learn and master programming and technology issues). The result is that this young man will have little opportunity to express himself in either English or Hmong. (They have managed to record a few Hmong words and phrases that he can play back via his Dynavox)

I guess the dilemma for AT developers is that there is a relatively small American market for Augmentative communication devices in English, let alone other languages. And no doubt programming in other languages is far more challenging when you are not a native speaker yourself. But when you think about the increasingly diverse population of non-English speaking immigrants to the US -- not to mention Spanish language speakers elsewhere in the Western hemisphere, it seems almost discriminatory in its effect to limit education & other opportunities for non verbal/speech disabled culturally diverse youth and their families.

- o **Re:Augmentative Communication devices in languages other than English** by **Phil Parette** on Jan 07, 2005

This issue was consistently raised by families across cultures several years ago when we worked on the Families, Cultures and AAC CD project. Native Americans, Hispanics, Asian, and African American families talked about the 'voice characteristics' limitations of AAC devices, e.g., a child from a Navaho community would not have the same dialect/voice inflections represented on his/her device. Similar concerns for other cultural groups have been articulated, and I agree that this is an issue from both a vendor and user perspective. The AAC market is quite small, and yet there are very diverse needs among users around the country. The case scenario that you shared is yet another example of how individual needs are frequently unmet when devices are designed to be used by large groups of individuals.

- o **Re:Augmentative Communication devices in languages other than English** by **Joy** on Jan 12, 2005

Certainly pronunciation of other languages is an issue with speech synthesizers that they have programmed to use American English phonemes as their primary means of producing speech. There are three possible solutions that might be useful.

First, although synthesized speech is still the most flexible for producing unique utterances, there are also quite powerful voice output communication aids (VOCAs) that use digitized speech - recorded human speech - available at present. With digitized speech it is possible to record EXACTLY the language or accent that is needed.

Second, there are also devices that have a combination of digitized and synthesized speech which would enable a person to use the recorded speech that was available, and then, when what was needed was not available, to use the synthesized speech for what was not there.

Third, there are synthesizers in use in other parts of the world that speak languages other than "American" English and are able to speak with other than an "American" accent. Several AAC companies have a large presence in Europe where not only British English, but a host of other quite phonemically different languages are spoken. Ask AAC device manufacturers about this if you need to speak more than

one language or if there is an interest in learning other languages.

Just some ideas that might be useful.

- **Re:Augmentative Communication devices in languages other than English** by **Tom Nurse** on Jan 14, 2005
Great suggestions Joy, thanks for sharing them.
-

- **Families Hostile to Technology** by **Susan V.** on Jan 10, 2005

In these discussions, the problem described is usually getting recalcitrant schools to pay for the technology and technophobic (or just plain overworked) teachers to use it. But what about when the school has identified and is willing to pay for computer-based programs (identified by the teacher) and the family is wholly unsupportive because they "don't want their child to be sitting in front of a computer screen all day"? I've had more than one of these cases (or some variation on the theme), in which parents have been hostile to technology. Although we've explained that the child would not be deprived of human contact during the day, the parents have remain unmoved.

Susan

- **Re:Families Hostile to Technology** by **Cathy Varner** on Jan 10, 2005

There are also the parents who don't want their children to look different so reject the use of technology that would enable those children to communicate with their peers and participate in classromm discussions, as well as help them keep up and enjoy the learning experience. Perhaps having parents visit other classrooms where technology is used successfully would help them accept integrating it into their child's educational journey. Or introduce them to other parents whose children use technology in the classroom so it's not the "experts" telling them what to do with their children.

- **Re:Families Hostile to Technology** by **Deborah** on Jan 11, 2005
As a parent, I love to share the benefits of assisitive technology with other parents. In addition, I can say that the most effective advocates for the use of technology have been adults with disabilities who explained the difference it made in their lives. Adults explaining how powered mobility had promoted independence and opened doors to new opportunities by allowing them to explore the world without physically exhausting themselves were far more persuasive than the physical therapists who were advocating for physical fitness benefits of hand-powered wheelchairs. Hearing Bob Williams speak so articulately using his "liberator" augmentative communication device was also inspiring to me. So, I agree that it could be helpful to introduce families to others who have had a successful experience with AT, but I also think it is valuable to have adults with disabilities to share their experiences families.

- **Re:Families Hostile to Technology** by **Phil Parette** on Jan 11, 2005
One of the things we heard frequently when speaking with families across cultures from different parts of the country was that families often prefer to hear from other families who have had experiences with AT. This is often far more preferable than having 'experts' who are education professionals providing information. We also know that among some cultural groups, respected individuals within the community are key individuals who can serve as liaisons between the schools and families within a particular cultural group. For example, in

California, we found that a certain Vietnamese physician who was well thought of was instrumental in facilitating a dialogue between families within the Vietnamese community and education professionals. Without such liaisons, in some instances, it may be very difficult to develop trust with some families and to have meaningful dialogues with them.

- **Re:Families Hostile to Technology by Tom Nurse** on Jan 14, 2005
Without questions presenting with my daughter has been far more powerful than just me talking about the power of AT. My daughter lives it and has grown because of the abilities that AT has supported.

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- **Transcript of Week One available by Jackie Hess** on Jan 10, 2005
If you would like to read or print all of the comments posted thus far, you can do so by visiting the following URL:

<http://www.fctd.info/reviews/reports/webboardTranscript.php?id=474>

All of the comments will appear on one (very long) page. You can then read without having to access each post individually. This feature should update itself automatically. If you have any problems with it, please e-mail us at fctd@aed.org. And please keep posting your comments and questions! Week One was great! We have another three weeks to go.

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- **Non-technology question by Jenna** on Jan 10, 2005
I apologize if this has already been discussed, but I haven't had time to read all the earlier posts. I'm wondering if anyone has any thoughts or suggestions about how to change the perception by some kids' families that a disability is a disease that their child might catch by associating with a child, okay, my child, who has one (or more). One of the arguments for assistive technology is that it allows the child to participate in school projects, study groups, etc. But it's not just the technology that has to be in place, it's parents willing to let, or encourage, their child to include your child, rather than making excuses about why they can't. It breaks my heart to see my son excluded when he tries so hard to fit in. I've tried all the obvious, 50-cent psychology ideas, but I always get the feeling that many (not all) other parents think my son is going to "infect" their child.
 - **Re:Non-technology question by Cathy Varner** on Jan 10, 2005
As a parent of a deaf child who relies mainly on sign to communicate and who has a whole symphony of noises with which he greets different experiences, I understand your feelings about others not accepting your child. Unfortunately, all we can do as parents, hopefully with support from our children's teachers, is to keep our children out there in the mix and show by our example that our child is not something to be feared. We need to help them be assertive and confident in tackling new situations, and give them tools to communicate about their own situation. After all, our children can be their own best advocates.
 - **Children as advocates by Phil Parette** on Jan 11, 2005
I agree with this statement of children being their own best advocates at some level. If we consider that most typical children are using technology in varying ways (IPODs, MP3 players, gaming software, email, cell phones,

instant messaging, etc.), use of technology by all individuals is sometimes more accepted than we realize. We've had students with LD here who use a range of AT to help them learn and be successful, and which have been deemed to be pretty 'cool' by their peers and adapted in their entirety as important tools for productivity and learning. I also think that the current generation of children is more accepting than we sometimes give them credit for. Millennial children as a group tend to be more conscientious about fairness toward themselves, and expect a greater degree of respect than previous generations.

- **Q by Tom Nurse** on Jan 14, 2005
Our family uses a motto that goes: "You win some, and you lose some, But you dress out for ALL of them!" Understanding, acceptance and kindness are not universal, but self love and respect sure can go a long way in how it impacts a child. That said, as a dad it sure hurts to see it happen.
- **Pereceptions of disability and change by Phil Parette** on Jan 11, 2005
What a poignant concern this is! What it does is to reflect deeply held cultural values within the Euro American value system. We tend to see disability as "fixable", i.e., it can be treated with drugs and other interventions, and the child can be made more 'whole'. We have but to look around us and see evidence of this value in our daily lives--any time we have an ailment or feel bad, we go and see a physician to fix the condition. If we have a cough or runny nose, we go to a pharmacy and purchase pharmaceuticals. Other cultural groups see disability in differing ways, and it would be far too complex a discussion to attempt to address this here. Eleanor Lynch and Marci Hanson have discussed varying cultural perspectives of disability in their excellent text, *Developing Cross-Cultural Competence* (2nd ed.), and we have addressed varying cultural issues related to AT decision-making for a number of years in scholarly forums. Our position here at Illinois State University is that until technology is a part of the educational experiences of all children, those that use AT may always be seen as being different in some settings and by some individuals. Obviously there is an acculturation effect that is always in play, i.e., people are changing over time in response to new experiences, exposure to diverse attitudes, etc., though these changes are often generational. We are hoping that with the impetus of No Child Left Behind and the pressures to achieve and become productive members of society, that a window of opportunity presents itself for greater infusion of AT and UDL principles across the curriculum. The current emphasis on 'AT outcomes' will also drive this process. One of the outcomes that we may begin to look at in the days ahead is 'quality of life'--to what extent is the AT user's quality of life enhanced (or that of the family). This holds great promise for facilitating attitudinal changes assuming those developing the informational and professional development strategies and materials are sensitive to outcomes, and showing how technology is used in the daily lives of all students.
- **Re:Perceptions of disability and change by Dee Dee** on Jan 11, 2005
Increasing quality of life through assistive technology may be a harder sell for 1) students with more severe disabilities who are non-verbal and 2) amount of time an employer will have to spend to learn how to communicate with the person using assistive technology. From personal experience: As I try to place older students at work sites, some of the more severe who are non-verbal and use even the basic assistive technology (like the books we make at school) are more difficult to place than a child with a more mild disability who is verbal (even if they are hard to understand) We are all familiar with the statistics for employment for persons with more severe disabilities. To render

them to a life of public assistance is cruel. I find it especially patronizing when I hear from an employer, "Well, how much of this do they really understand?" It is frustrating and results of the employer survey research project I completed indicates that employers like to hire people who are deaf (sign language is fun) or people with "Down's" who are higher functioning: like the ones on the poster for Special Olympics.

The cosmetic factor is a huge issue and the more significant one's disabilities: the less likely s/he will be employed. One person said: "Our customers do not want to come in here and see someone in a wheelchair using a head pointer!" Thank you for the opportunity to participate in this discussion.

- **Re:Perceptions of disability and change** by **Phil Parette** on Jan 12, 2005

Dee Dee-I certainly agree with you that the 'physical aspects' of disability and AT continue to be of great concern in our society. Again, this is a strongly held cultural value that has emerged in western societies--to be young, attractive, slender, have nice abs, etc. is what is reinforced in the media, whether it be the movies, television, magazines, or marketing materials, we continue to see the importance of certain archetypes that many think are representative of our society, and are to be desired. Most of us realize that these archetypes are far removed from the realities of the masses, though our culture in general continues to reinforce such perceptions of desired physical status. With the passage of the ADA we began to see persons with disabilities who use technology (e.g., wheelchairs) in advertising and other public venues, and at some level I think there is far greater awareness (and to some degree acceptance) of disability, though we have made less progress than might be desirable. As I noted in a previous response, what may be encouraging is that we have a whole new generation of children who are more technology literate (and accepting), and who, as a group, are more connected with their peers and the world in some ways than previous generations. I think that this holds promise for us as a society as long as the Baby Boomers who are now in power continue to advocate for the integration and acceptance of all in our diverse society.

- **Re:Perceptions of disability and change** by **Dan** on Jan 13, 2005

Hi Phil,

Ever since you first mentioned your perception that today's children are more accepting of both technology and diversity among their peers (including, of course, disabilities) I've been thinking about whether or not I agree, based on what I've seen in and out of classrooms. I still haven't made up my mind. I do see some evidence of your point, but perhaps not as much as I'd like (speaking now of their acceptance of diverse peers, not of technology). In thinking about the factors that influence kids, I'd say that the media is doing a better job than it did when we boomers were kids, of portraying diversity in a positive light. (When we were kids, they didn't portray it at all.) But an awful lot still depends on the attitudes of parents and teachers and those attitudes are still all over the map, in my opinion.

When a child with a disability has good social skills, or is

engaging in some way, I think peer reaction is often good. But when a kid doesn't have those skills, if the teacher isn't strongly proactive, and/or the students don't have parents who promote aggressive kindness, then I'm not sure the disabled child has any easier a lot than we did years ago.

Perhaps you can tell us more about how you arrived at your position. By the way, thanks for all the long, thoughtful posts. They've been great and I've shared them with colleagues.
Dan Kincaid

- **Re:Perceptions of disability and change by Phil Parette on Jan 13, 2005**

Dan:

We have begun conversations with students with disabilities both here on the ISU campus to understand their perspectives, and are completing a study with students w/ mild disabilities--asking them about their preferences and use patterns for technology. As you would imagine, little has been done to date to really look at what school-age kids use, and to a lesser degree what they prefer. We have heard that students note that many teachers are less technology literate than students, such as what was noted by this student w/ LD:

That ah, teachers now, the older ones are a little bit, ah, more hesitant about using technology because they are not really sure about how to use it or go about it, whereas the younger ones and the ones that have just come out of college, and are fresh and know what's going on, they are feel more comfortable using the technology in the classroom.

Another student commented:

I know that I have been in a few classrooms that have...televisions in the classroom and with the whole class can, um, all look at the screen and look up information on the internet, do what they need to do. Also with tape players that we used to have, we now have CDs and ah, from VCR's to DVD's, things have just completely changed to do a 180, whereas my parents are like, ah, are like having a much more difficult time doing, working with these things and knowing how to function them whereas I have grown up with them, and friends of mine, we have, it's just easier to catch on.

One of the most important studies was the Millennial Student study [see Miller, C. (2003). Postmoderns: the beliefs, hopes, and fears of young Americans born 1965-1981. Nashville: Discipleship Resources.] which has examined the technology use patterns of typical students, but not students with disabilities. If we know, based on the findings of this study (which followed

children across years) that Millennial children have specific technology preferences and use patterns, the question then suggests the need to examine to what extent children with disabilities have such technology use patterns and preference, which we have initiated here and anticipate having data to present at ATIA next week in Orlando re: middle school-age students use patterns and prefs. What we also know is that teachers typically use technology more for planning purposes vs. integration in the curriculum, and if students would prefer greater integration (and access) there is a huge educational curricula implementation issue that we need to address. At this point, our position is based heavily on the existing literature (scattered studies that hint at the need to consider these generational preferences), but we will have data soon that is anticipated to support some of our thinking about this issue.

- **Re:Perceptions of disability and change** by **Tom Nurse** on Jan 14, 2005
I guess my short answer is: It's a sad day when a teacher can't be taught!

If student's are better using the technology let them lead, then as you learn, you can teach it too!

- **Re:Perceptions of disability and change** by **Tom Nurse** on Jan 14, 2005
Perhaps as we move from "placements" to more flexible options like supported self-employment and micro enterprises more individuals with significant disabilities will be able to work doing something they like. Maybe folks don't always have to fit in but rather find a fit that works for them.

It's not that simple I know, but AT is helping create other effective ways to communicate and connect that are opening doors to hidden abilities. The impact AT is beginning to have on supplementing cognitive functions such as helping with memory, organization, communication are just a few examples of doors that are starting to open., but these doors don't get considered if the expectations are too low.

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- **A.T. Device** by **picture perfect** on Jan 11, 2005
I have found pictures to be the most helpful for non verbal students. They are cost effective, easy to use and can be individualized. I have used them with great success. Although, I have ran into some roadblocks with finding trained school personnel to impliment them. I think every special ed. team should have a specialist to address this issue before an I.E.P. is written.

- **RE: TEACHERS AND SCHOOLS BECOMING MORE AWARE OF THE GREAT TECHNOLOGY OUT THERE !** by **Lorraine Wittemann** on Jan 11, 2005
How Impressive it is to see such dedication in this area of AT- Area training coordinator.
 - **TEACHERS AND SCHOOLS BECOMING MORE AWARE OF THE GREAT TECHNOLOGY OUT THERE !** by **Phil Parette** on Jan 12, 2005
I agree, and the AT consideration mandate of the IDEA (and its most recent emphasis on access to the general education curriculum) provides great impetus for new partnerships nationally to create new tools for AT professional development, and especially presents opportunities to develop AT leadership in our nation's schools.

- **Communication Style Differences in AT Decision-Making** by **Phil Parette** on Jan 13, 2005
To what extent have any of you observed distinctions in communication styles of families across cultures? We have found that Euro Americans often have more direct, impersonal (using first names), prefer direct eye contact, and are more time-conscious in their interactions with families during AT decision-making. Are there any anecdotes that some of you could share to enlighten our discussions re: differences that you have observed, and the outcomes of either being insensitive (or sensitive) to such differences?
 - **Re:Communication Style Differences in AT Decision-Making** by **Ann** on Jan 14, 2005
I live and work in a very international environment. While I'm hesitant to make any sweeping generalizations (or statements that might be perceived that way) I would agree with your characterization of Euro Americans and note that our ways can seem rude and intimidating without our ever meaning them to be so. When I'm dealing with Asians, particularly those who are not yet Asian-American, I try to be much quieter than I normally am. When dealing with anyone for whom English is a second language, I try to speak more clearly and slowly than usual (not in an exaggerated, offensive way), particularly when using technology terms. Knowing when and how broadly to smile and whether or not to chance direct eye contact (particularly with Middle Eastern fathers) is always a challenge for me. Someone made the point that establishing trust is really important and all these body language and speech pattern issues have a big impact I think.
Ann E.
 - **Re:Communication Style Differences in AT Decision-Making** by **Jackie** on Jan 14, 2005
I found Ann's post very interesting. I too live in an international area. My son's high school boasts being the most multicultural school in the country, with students from 79 different countries.

In the Family Center's Summer Institute discussions, Joan Breslin-Larson told an interesting story about an experience she had with a Middle Eastern family. When she first interacted with them, she wore jeans (to accommodate floor time with the child) and posed questions directly to the mother. Apparently, the father was highly offended, felt she had been disrespectful, and refused to allow the family to continue with the AT assessment. Joan managed to convince them to return; she then wore a dress and posed the questions to the father, who immediately turned to the mother, who gave the answers. The story ended happily (as long as one doesn't dwell on the, to some of us, outrageous gender issues). Her concern, of course, was that the child be served, and her flexibility and perseverance accomplished that.

- **Re:Communication Style Differences in AT Decision-Making by Phil Parette** on Jan 14, 2005

When we worked with families across cultural groups several years back, we found that in African American families, it was often preferred that questions be addressed to a grandmother who was often a major decision-maker in the family. Eye contact could sometimes be perceived as disrespectful if one maintained contact too intensely or for too long. Among Hispanic families, questions typically needed to be addressed to a father as the machismo cultural value often operated. With Asian families, we had to work w/ liaisons who had relationships established with the families. We also heard from Asian families, that eye contact was deemed disrespectful. So there are certainly some very real differences that we need to be cognizant of across families, and the anecdote shared above is an excellent case in point regarding how unanticipated outcomes may sometimes unfold if we bring our Euro American (and school) cultural values and interaction styles into family settings.

- **Re:Communication Style Differences in AT Decision-Making by Joan** on Jan 26, 2005

Well- I have been more of a lurker in this discussion, but I am ready to jump in again!

Jackie's reflection of the story I told over the summer is dead on. I learned so much from that experience- the skills that worked so well for me as a middle class, midwestern white woman fell apart completely in that meeting. I began to look at the changes in my service delivery area, and saw huge increases in the numbers of immigrants and refugees. I contacted a refugee support program, and purchased a series of monographs on appropriate behavior and expectations for the new cultures in my state. I studied a lot before I met someone from one of those cultures- tried to learn a greeting- which frequently made folks laugh because I was so poor at some pronunciations. But, it helped bridge that gap when folks realized I was at least trying. So- as we work with an increasingly changing population, we as AT practitioners have even more demands- keep up with the rapid changes in technology, keep up with law, keep up with changes in population. I think I need a vacation!

- **Sytems and Family "Cultural differences"** by **Tom Nurse** on Jan 14, 2005

As we discuss "cultural differences" one of the biggest cultural influences can be the difference the culture of a school system, with all the layers, processes, rules, and power when compared to the values, traditional and experiences of a family. Communication and trust between these very different perspectives can be very challenging. Trust is not always there and can be easily lost, but trust is one of the most important factors in effective collaboration communication.

If we look at a child strictly from an "educational" or school time only view we miss so much of the child's life including what happens when the child is not at school. That 's where the family has the greatest control and influence, but too often, AT discussion is focused on almost entirely on education, rather than how to "increase, maintain, and improve the functional capabilities" in ALL the child's environments. I look at "life" as being educationally relevant rather than just the school hours, so then school, home and community all are educational environments.

Because of fears of entitlement responsibilities many school based "experts" can be hesitant to discuss a child's non- school environments because if you talk about it, you might have to

pay for it. This results in some critical expertise to be withheld from the IEP team and families who don't have the experience to know about AT yet.

This perception of "holding back" can be very influential to engaging families and building trust for "open" discussion, when it may not really feel like open discussion.

I think it is so important that we start from the family out, rather than imposing AT on a family.

For example, if a family is concerned about "their child spending the day in front of a computer" let's talk about what they want/need their child to do FIRST then we can learn so much about what they value and if any AT may very well address it. This form of communication helps build trust and respect, because when we help improve options for the child in the home environment you can help the entire family and help build buy in.

The discussion about being a child being successful in school are also so very important, so it is critical that the team openly explore the student's abilities and concerns, secondly where does the child need to do these things, third what does a child need to be able to do (i.e. write, read, be literate, communicated, work on a team, etc) these "functions" and finally, is there any technology solutions that could "increase, maintain, and improve the functional capabilities" of the child. As discussed last month, this is an example of the SETT (Student, Environment, Tasks, and Technology) approach to AT. Don't forget identifying the services and ask "Who's going to do it?" questions

Families bring so much to the table because they love their child, they've been there before the "experts" and they'll be there after they're gone. This does mean any disrespect but rather recognizes that "experts" influence rather than control the child. Together is better.

- o **Re:Sytems and Family by Phil Parette** on Jan 14, 2005
Tom, you make an excellent point, as we always start with the child (and family) FIRST given that priorities may be very different than those that education professionals bring to the table. I appreciate you making reference to the school culture, as much has been written about the school culture and its influence on the curriculum. Unfortunately, many school cultures are top-down with regard to decision-making, though the schools may purport to be family-centered (which by definition means that families are central to all aspects of planning and curricula implementation). Budgets for programming, services, and curricula are determined more frequently by a few individuals and such decisions typically do not reflect the participation of many. Similarly, administrators make decisions re: interpretation of IDEA regs and other school legislation and funnel it to targeted individuals, such that families (and teachers) are often less well-informed and participating than might be desirable. Such issues have driven the charter school movement in recent years, where values of a particular school drive decision-making, and may result in the exclusion of some who do not hold the same values articulated by a charter school.

I also agree with Tom that families MUST be viewed as experts in their own right because they have spent a lifetime with their children vs. the limited 'snapshots' of time that education professionals generally have spent with these same children.

- **Re:Sytems and Family by Tom Nurse** on Jan 16, 2005
Perceptions of time are also much different when you compare "systems time" versus "family time." To illustrate this point I have an hourglass that

sits on my desk to remind me about the passing of time.

When I look at the sand on the bottom I see all the yesterdays and I can learn from these experiences, the sand passing through the center is right now and I can seize the moment, and the sand on the top is all the tomorrows, but I don't know how of them they'll be.

Five years is considered a short period of time in a system to make change, but five years in the life of a child can be 1st grade to 5th grade and the changes can be huge! Unlike systems that can start over if it doesn't work we can not flip our children over and start the sand again!

This difference in the perception of time can create a natural tension between the urgency of a family's sense of time versus the slower urgency of system's sense of time.

When I'm pushing hard for something to happen NOW it is not because of a lack of respect the system but rather I am pushed by the ever growing grains of sands!

Families can be such powerful influences in system's change but too often those of us who project this urgency get labelled as "those parents" rather than valuable contributors to improving the systems abilities to serve today's children in a timely manner. I not only want to help my child but also to help create the same opportunities for those who may not be so vocal.

I am always very grateful when I work with professional educators who see past the "urgency" and recognize my passion, commitment and knowledge, and when this happens the results have been better for everybody.

Seize the day!

- **Re:Systems and Family** by **Evan** on Jan 25, 2005

I was glad to read this post, after reading a few of those below that counsel patience. Yes, I know that those who work for system change need to have enough patience and sense of the big picture that they're not constantly frustrated. But, as you so rightly point out, five years is a HUGE percentage of a child's critical development years. In my opinion, we can't afford to take a relaxed attitude about even a month or two. That's not to say that we should call the school every day, but I certainly feel the need to stay on top of things daily and when there's an important decision or implementation issue that needs to be addressed, I check in with the school weekly, to be sure that it's not getting buried under a pile of papers on somebody's desk. I use the "send brownies" approach and am as pleasant as can be, but the folks at my children's schools know that I'm not going away and that seems to keep things from falling through the cracks. If, once in a while they get frustrated with me, I tell them, "Look, I like you, but I love my kids more. I want you to have a good day, but I need for them to have a good life." Sometimes that helps.

- **Transcript Reminder** by **Jackie** on Jan 14, 2005
As we approach the end of Week Two of this very interesting discussion, I just want to remind everyone that you can read all posts in a single, long transcript on the following page:

<http://www.fctd.info/reviews/reports/webboardTranscript.php?id=474>

This saves you from having to click in and out of individual posts.
Thanks to everyone who has posted so far and to all those "quiet participants" out there.
We'd love to hear from you too.

- **Generational differences** by **Phil Parette** on Jan 18, 2005
We've talked about differences in technology use patterns across generations previously, and have noted that there are differing ways in which families may respond to acculturation influences. Tom has noted that we often have expectations that teachers learn 'new things' and be open to doing what is necessary to help children learn, but the reality is that teachers are frequently very entrenched in doing things the way they have been taught (e.g., in preservice programs) and are also influenced by their own cultural value systems (e.g., students should want to demonstrate individual achievement vs. participating/cooperating in groups). What experiences have those of you had around the country in working with families across generations w/ regard to acceptance of and willingness to try new technologies with children with disabilities?
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- **AT Experts** by **Phil Parette** on Jan 18, 2005
In looking at how AT skills and dispositions find their way into the lives of education professionals, some people have suggested a 'funneling' effect occurs. That is, professionals acquire specialized training and skill sets over time, and then systematically 'funnel' the information to various constituencies with whom they work. The net result is that there remains a cadre of AT experts in particular locales that are responsive to local needs, and these experts continue to be relied on to have primary leadership in AT decision-making. As a result, AT skill sets are never acquired broadly by most or all education professionals, or families with whom they work. To what extent have our online discussion participants observed such funneling effects in the past?

- **Re:AT Experts** by **Sue** on Jan 18, 2005
At conferences I regularly meet AT professionals who say that they "fell into" the field because they were the only one in their school system who was willing to learn how to use a particular piece of equipment. They often express frustration at their own lack of understanding of the field at large. They also seem frustrated with their colleagues who continue to refuse to be trained on equipment. I got into the field in pretty much the same way and I'm wondering how many others did as well. There isn't much formal AT training at the pre-service level. So I guess for most of us it's a matter of on-the-job training. What frustrates me is how unwilling my school system is to give me time off to get training. Often the best opportunities are during the day. Sometimes they're even free, but I can't go because it costs the school money to get a sub. I guess it all starts and ends with money.
- **Re:AT Experts** by **KD** on Jan 18, 2005
For me it's a lack of confidence. I manage to learn how to use certain AT devices to help one or another of my students, but I wouldn't feel comfortable "training" others. What if I told them something wrong and it had a bad effect on a student? I wouldn't

want to be responsible for that. I think it's the responsibility of the school system or the company that manufactures the equipment to get people trained.

o **Re:AT Experts** by **Guest** on Jan 18, 2005

Things won't change until teacher training colleges get their act together and get serious about including AT, and all education technologies, in pre-service curricula. At the in-service level, they won't change until teacher unions stop fighting edtech training (although they've gotten a little better in recent years). Personally, I think it's a disgrace that in today's technological world, teachers remain so unskilled in technology. It's completely hit or miss, if a teacher happens to be interested and committed enough to learn about the technology on her or his own. Some of my son's teachers use blackboard.com skillfully and regularly. Others completely ignore it. Some teachers act completely put upon if they have to learn anything about his AT. Others are great. Like I said, it's hit or miss, and given the world that all kids are growing up in, not just kids with disabilities, I think it's ridiculous that we allow the education system to be the only sector of society that lives in a pre-technology bubble.

▪ **Re:AT Experts** by **Phil Parette** on Jan 19, 2005

While I agree that institutions of higher learning have much work to do, we should keep in mind that cultural change takes much time in many respects. Look at the Rehab Act of 1973--Section 504 has been around for almost 32 years, and we as a society are still struggling with access issues. The ADA helped and we are still trying to legislate acceptance, non-discrimination, and opportunity. We have problems w/ access to the work place, education, public accommodations, etc. We still have attitudinal problems about disabilities which are functions of deeply held cultural values across our society. We all have lots of work to do, through living by example, through advocacy, and by developing new skills that enable us to help others understand AT and its potential. So again, I agree that changes are needed in higher education, but it's not just in teacher education programs as AT knowledge and skills are needed across curricula in our colleges and universities--in business, art, social work--all disciplines if we are truly to make the potential of AT a reality for all.

▪ **Re:AT Experts** by **Janet Peters** on Jan 20, 2005

I agree, I think it sometimes is depressing to not think we are further along with this and we all want to see results of our efforts NOW. But we (as family members, advocates, and professionals) are laying the ground work for future generations and we need to keep up the good fight because small increments will lead to a geometric progression (BIG CHANGE) in the future.

▪ **Re:AT Experts** by **Phil Parette** on Jan 20, 2005

Janet,

The amount of work currently in progress nationally is staggering. We are here at the Asssitive Technology Industry Association meeting in Orlando, and I am in awe of the level of partnering that is underway across vendors, higher education entities, not for profits, and other groups. There is a high level of awareness of the need for high qulaity professional development nationally, whether it is in preservice, or other professional venues, and I agree with you that collectively many people are indeed laying the foundation for future

generations (though the progress does seem frustratingly slow at times!).

- **Re:AT Experts by Tom Nurse** on Jan 25, 2005
These are promising times for AT. We must get going because the opportunities are lost if the days pass by!
Thank you for all the thoughtful sharing, Tom

- **Re:AT Experts by Marie Swanson** on Jan 26, 2005
I am involved with training special educators at the preservice level. I teach (sometimes co-teach) a 3 credit course with about 2 credits devoted to AT. Although only the ECSE students are required to take the course, other students in SpEd are enrolled as well but I wouldn't say the majority of special ed take it. The students learn about components of AT and brief overview of the range of technologies involved in these various areas. More content is developed on technologies for communication. They learn about AAC systems, informal assessments (focus on observational assessment) and general implementation strategies. They have some hands-on with 2 mini labs about 2-3 hours each. In the first lab they work with a variety of switches to determine their features and what abilities/skills students might need to use these switches. They have again a brief time working with interfaces for switches such as a switch-latch timer. In the second lab they have 4-6 low tech speech output technologies that they troubleshoot, program, and access with direct select or basic scanning. They are also assigned to modify a classroom activity using at least one assistive technology, e.g. switch interface with the All-Turn-It.

In the SLHS department I teach a course, Introduction to AAC, at the junior level. They spend some time on understanding the various components of AT and how AAC meshes with other assistive technologies. Each student has hands on with only one device, software program, or access option but each student presents their "lab" experience in class so all are exposed to a wide range of AAC.

Kris Vossler and I teach a 3 credit seminar in AAC at the graduate level. They have 2 classroom credits and 1 lab credit. Kris has an extensive lab that has competencies for each lab. The students work on and with a large number of AAC devices, switches, software programs, access options for both speech and writing. Also they are involved working with these technologies interfacing with other assistive technologies. (Does that make sense?) What I mean is they are working with a variety of assistive technologies beyond AAC. Maybe the syllabus would be more informative if you want that at some time. (only FYI-not trying to pan it off on you.)

- **Re:AT Experts by Tom Nurse** on Jan 28, 2005
Thanks for your input. Please share. I would also encourage you to have ACC users help teach your students the power of ACC. The message can both inspire and enlighten. Thanks for helping build more options for the future. Quality teachers are so important and preservice can be the key to long term improvements in AT services.

Tom

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- **The technology culture of students with mild disabilities** by **Phil Parette** on Jan 20, 2005

To what extent are some of you seeing students with mild disabilities using technology in similar ways to their peers, though being excluded from traditional social venues. For example, are you seeing children using chat rooms, having multiple email or IM accounts, and other venues to develop a social concept of self, and exploring interaction patterns with others (in a virtual world), and yet not having the traditional skills of socialization in real time, face-to-face settings with their peers?

- **Understanding family perspectives** by **Phil Parette** on Jan 21, 2005
In what ways have our discussants around the country approached family members to begin discussions about AT for their children with disabilities? Are there particular strategies that you have found helpful or effective? Many suggest rapport-building, but what are the ways that you have found to build rapport and establish trusting relationships that lend themselves to real partnerships with the families?

- **Re:Understanding family perspectives** by **Connie S.** on Jan 24, 2005

I work at a community-based assistive technology center and we make a point of reaching out to parents by offering free workshops on AT, open lab hours, and no cost consultation services. These outreach efforts invite families to explore assistive technology options for their child regardless of financial status and outside of the school/IEP environment. The fact that our center is not affiliated with the schools or vendors helps us establish a trusting relationship with the families more quickly. Often, school professionals will refer families to our center because they know that families may be more open to AT strategies outside of a school setting.

- **Re:Understanding family perspectives** by **Phil Parette** on Jan 24, 2005
Connie:

What are the specific strategies/approaches that you have used to make contact and build rapport? Are there specific strategies or approaches that have been less effective than others? Does one size fit all (i.e., a general approach for all families) or do you have a menu of strategies to choose from depending on the characteristics of the family? If the latter, how are decisions reached regarding what strategies are used with a particular family?

- **Re:Understanding family perspectives** by **ac** on Jan 25, 2005

I try to build rapport with the family encouraging them to share their ideas and needs - I really try to let the family set the agenda for the technology consultation. I do believe that parents understand their child's abilities and needs best and so I strongly encourage the parents to speak up and discuss their ideas about technology if they feel comfortable doing so. One size definitely doesn't fit all families in terms of needs for technology due to many reasons, including financial status, comfort using technology, available supports, and of course the child's particular situation. Therefore, decisions are made on a case by case basis BY the family not me - my role is simply to provide the information they need to make an informed decision.

- **Re:Understanding family perspectives by Phil Parette** on Jan 26, 2005
If the family is hesitant to share their thoughts (if they have no understanding of AT, or if they deem professionals to be the experts and may be thus reluctant to participate, or if there is simply a deference to authority figures and making suggestions that would seem to contradict the thinking of experts), are there strategies that you then employ to elicit their thinking? For example, would you ask the family whether there are people in the community that they were more comfortable talking with (to act as liaisons)? There seems to be several layers of involvement w/ families here: on the first level is understanding their preferred communication styles, preferences, values, etc., while on the second level you provide information that is needed to help them make an informed decision (if they choose or desire to participate).

- **Re:Understanding family perspectives by Joan** on Jan 26, 2005
I have a mixed perspective as both an educational professional, but I was first the Mommy in the IEP meeting. The lessons I learned there hopefully have helped me in providing supports for the educators with whom I work. I propose for those parents who do not know how to express what they want- I propose a series of questions that include "what are your child's goals?" (frequently put into more family friendly phrases) "What are some success stories for your child?" (what works, what strategies does the child respond to, what is motivating) and finally (always after focusing on strengths)"What does your child need to do that is hard?" As often as possible, the child must be asked the same questions. I am always impressed with the perspective the student brings to a discussion regarding what works, what allows him or her to be successful.

- **Re:Understanding family perspectives by Phil Parette** on Jan 27, 2005
Wow! These are great questions! In an article published in TEC several years ago, we posed a series of questions designed to help teams understand varying perspectives in five different areas:

The first area that might be explored is the degree of independence desired. This issue is important because some families may be comfortable with a child remaining dependent (and connected to the family) while others may prefer moving the child toward greater independence (and less connection with the family in certain areas of life). Questions asked might include:

Will you use the AT in community settings outside the home?

What skills or commitment will be required of others in the community for your child to be able to successfully use the AT device?

Do you want your child to perform routine daily tasks, or do you or other family members want to do these for the child?

Another area of importance is the degree of acceptance by others deemed to be important to the family. Questions might include:

Are there reasons that you would not use the AT outside the home?

Do you think the AT will make you or your child feel self-conscious or stand out if you use it in public settings?

How do you think people will feel around you and your child if you use AT outside the home?

Immediacy of benefits is a third area that might be considered to be explored, as many families will expect quick changes (e.g., if an AAC device is provided the child will be able to talk and use the device in many settings quickly). Questions might include:

What do you think the AT device will do for your child?

How will you and your child use the device?

What benefits do you expect?

Do you expect the benefits to be immediate?

What training will be needed?

How will we pay for the device?

How often will your child use the device?

Will your child need assistance?

Who will provide the assistance?

A fourth area deals with family resource commitments toward implementation of the device. Questions might include:

Are there any reasons why you wouldn't want to use the AT device at home or in the community?

How do you think it will affect your child with a disability?

How do you think the AT device will affect your home environment? your children? your spouse? other family members?

Obviously, any of these questions can be modified to meet the needs/characteristics of a particular family member. The bottom line is that through such probing, teams can get a much better understanding of the family's needs,

preferences, and resources that can make the possibility of successful AT decision-making and implementation a reality!

- **Re:Understanding family perspectives** by **Laurie** on Jan 24, 2005
I find that parents are very interested in talking with other parents who have children with the same disability. I keep a list of parents who have agreed to talk to "newbies" about a range of issues, including AT. This has become a popular "service". Sometimes I get calls from other professionals who want to know if they can refer parents to me for names. Of course, I'm in a large city, so I have access to a large pool of people. This might be more difficult in a smaller town. Once a "new" parent gets some experience, they often call to say they're willing to be added to the list. While parents aren't necessarily AT experts (though I've found many who have done far more research than the professionals with whom they work), I try to refer people to those who are actively engaged in advocating for their kids. That means they get involved in the IEP process, they work the Web, they read the literature, etc. Talking to someone who has been there and who faces the same daily challenges as a parent of a newly diagnosed child does seem to create almost instant trust.
 - **Re:Understanding family perspectives** by **Phil Parette** on Jan 25, 2005
Laurie, This is great that you have an array of 'responses' to any particular family that approaches you for services. This certainly reflects a high level of awareness re: differences across families and cultural systems! Do you have a website w/ links to resources or information about these approaches so that others might benefit from your experiences?

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- **Post evaluations in school culture** by **Phil Parette** on Jan 22, 2005
One of the issues that has surfaced here at ATIA this week (in the context of AT outcomes, i.e., does the AT make a difference) is the notion of a post AT implementation plan. People have suggested that we can invest time in the initial evaluation followed by the wait time for a child to receive the device (and education professionals receive training) though little time is typically given to following up and understanding if (and why) the device does or does not work for the student.

Part of our current school culture is that too few education professionals feel comfortable with exploring the 'possibilities' of IDEA w/ regard to AT services that could be provided to a child. Teachers and other IEP team members may feel that any service that has a cost associated is suspect, and may not be perceived favorably by the school.

Yesterday, an example from New Jersey was shared. A student was evaluated and it was determined that a Dana was needed. The student had previously stated during the eval that he would not use an Alphasmart, as he had moved beyond that, it called attention to him, and his peers were not using these devices. A year later (since the teacher didn't know how to use such devices, and needed training) the school provided, guess what? an Alphasmart, and it was only available to the student in English class where the school felt he should be writing. Not surprisingly, the student didn't use the Alphasmart very often and was less successful with his writing, while the school was left feeling justified that they had made the

right decision not to spend the extra money for the Dana (since the student did not use the Alphasmart. Hellooooo!

What does make sense is a follow-up evaluation to determine the degree of success of the implementation. It would appear to me that a follow-up eval could be written into the IEP as a service to ensure successful outcomes subsequent to the delivery of the AT.

Have any of you had such experiences with the school culture (and patterns of behavior of its employees) behaving in such ways? Have you had experiences with post-evals, and have they made a difference in student outcomes?

- o **Re:Post evaluations in school culture** by **Joan** on Jan 26, 2005

Tom and all-

An AT evaluation sometimes only provides part of the information for a student. We have 30 school days in MN to complete an evaluation. This may be enough time to get all the information we need, but- frequently it only gives us time to determine what features a device might have. After that, we need to spend time gathering data to see which device that has those features is effective. And- there is not a set time line for those equipment trials. The IEP team determines what is reasonable.

Feedback and input from practitioners and parents in MN has helped our state education agency in developing a series of forms (they have been referenced in other FCTD discussions) that help a team in making an AT decision.

My personal favorite forms in the MN AT Manual are the PLANNING AND IMPLEMENTATION SUMMARY (where the team documents what they decided to do, and lays out the implementation plan, including a timeline for evaluation of effectiveness) and the EXTENDED CONSIDERATION LOG which is a tool to help the team document what happened when they tried a device. The tool guides the team through questions about the devices trialed- what did they try, did they observe enough trials to get effective data, what did the data reflect, was criteria met to determine that the device was effective. I would suggest that there are many schools which have a culture of making effective decisions and provide effective follow up. And- I would also suggest that, as Tom says, the student is an intergral and essential player in determing if a tool is really workable.

And- despite knowing that this is too long a response- I encourage all to take a look at the quality indicators for assistive technology (www.qiat.org) which examines multiple areas of practice for AT, including evaluation of effectiveness. Very useful information for schools or other service providers to determine what good practice looks like!

- o **Re:Post evaluations in school culture** by **sherndina** on Jan 27, 2005

Unfortunately, some school districts are very uncomfortable with technology. The cost is a factor, but sometimes it is that "no one wants to learn how to use the technology".

Yes, some parents are writing follow-up evals into the IEP. This is making the difference. Also included in the IEP is "who will provide training to the teacher, student and family on how to use the device."

(and how often the training will offered). Follow-up evals in our district did confirm to the teachers,(and the district) that technology is a key.

Sometimes the technology initially selected, may prove that something else is needed.

Don't stop after using one system. What works at school may be not be the system for home.

Since our district has done follow-up evals, doors are beginning to open. Now that they have seen the results, they realize that "their excuses can rob our children of their "independence". More teachers and districts are changing their mindset. School cultures can sometimes be a battlefield.

Don't give up....keep pushing.

- **Re:Post evaluations in school culture by Phil Parette** on Jan 28, 2005
This is really encouraging--as I noted, we heard this from numerous participants at ATIA last week, and this posting is a testimonial to the fact that conscientious follow-up can make a difference. More than anything, from a family perspective it demonstrates concern and presents another opportunity for family involvement.

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- **Access to AT far behind for many SE Asian families by DX** on Jan 28, 2005
Accessing to AT is far behind for many SE Asian American families

Although computer has been a powerful tool for learning and information, many Hmong families, especially middle and older generation are underutilizing its system. Most what they have known might be that of typewriter. Not just unfamiliar with a computer usage but how to use it is a barrier for many, even though they have a powerful one with internet access at home. They only supply what their children need but it has not been incorporated as a tool for accessing valuable information and resources for the family.

The fact is many have not touched a keyboard or a mouse and are afraid of system breakdown. Many don't read English well and there is a limit number of site available in their language. I heard from a Hmong family whose father wants to listen to Voice America, a short wave radio station that broadcasts international news one hour daily in Lao Language and he asked his young son to open that site for him. He does not want to do anything with the computer at all.

AT is even new to many families of children with disabilities. They are familiar with what their child has based on their child's immediate need such as a clock, communication device, a high volume telephone. Many younger parents, of course, are computer literate and may be aware of AT for child with a disability but I am not sure how much they can afford such device. My guess is that only a few provide appropriate AT device for their child because they have expertise in technology field. Those who are computer illiterate may have a limit access to AT information so they are dependent on professionals who work with their child for their advice. Again, many may not have the money to buy it so they depend on their child's qualification or eligibility for such device through school or medical insurance.

Even though they are interested in any tool that will help their child's learning or making progress, meeting the whole family need is a priority for many parents. They spend most of their time on this effort and may not have the opportunity to explore materials that benefit their child with a disability. Caring for child is another priority for parents. So how to help a family access to AT information and get the most of AT benefits is a question to think creatively.

Dao Xiong, Parent Advocate

- **Re:Access to AT far behind for many SE Asian families** by **Phil Parette** on Jan 30, 2005
Dao, this is a wonderful sharing with our participants who may not have had much contact with families from Asian backgrounds. Have you found families who are hesitant to discuss family issues due to feeling a sense of shame, or loss of face, for having a child with a disability. We have often seen this characteristic noted in the professional literature, though again, we cannot generalize across the many cultural groups of people who represent a very broad Asian culture. If you have had contact with such families, what strategies have you found successful to build rapport, and gain the trust of the advocate such that meaningful decision-making (in partnership with the families) can take place?
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- **Thanks to Phil, Tom, and all** by **Jackie Hess** on Jan 28, 2005
I'd like to thank Phil Parette and Tom Nurse for doing such a great job of moderating this very interesting and information-rich discussion. Thanks also to those of you who took the time to post comments and questions and to those of you who followed the discussion quietly.

The discussion transcript will remain available to you and your colleagues in the Online Discussion Archive. If you prefer to read the discussion from start to end, in one long document, you can do so at <http://www.fctd.info/reviews/reports/webboardTranscript.php?id=474>.

The discussion transcript will also be made available on our upcoming AT Resources CD-ROM.

Please join us in February for a discussion of: "What Does the Research Say? - Locating and Interpreting Special Education Technology Research" led by national expert Dr. Dave Edyburn. The discussion will begin on Tuesday, February 1st and will continue until the 28th.

Again, thanks to all. I look forward to seeing you online!

- **Thank you for all your thoughtful contributions** by **Tom Nurse** on Jan 28, 2005
It has been a pleasure and honor to work together with Phil for the past month. Phil, your respect and knowledge of diverse families was clear throughout your insightful entries.

Thank you to all the wonderful contributors. Each of you added so much to the discussion. It's so wonderful to see the love of families for their children and the commitment of professionals to make a difference in our kids' lives. Let's keep working together.

I wish you all continued good health and good future. I also hope you all continue to share your passion and commitment for assistive technology with others that you meet along the way.

Keep reaching for the stars and the moon won't seem so far!

Peace to you all,

Tom Nurse

- o **Re:Thank you for all your thoughtful contributions** by **Phil Parette** on Jan 30, 2005

Tom, it has been a distinct pleasure to have participated in such a meaningful discussion with such a recognized and caring parent and advocate. The quality of the discussion this month has been enhanced mightily through the involvement of a parent who is a family expert. One of the things that we have continually noted to students in the university classroom and education professionals around the country is that parents ARE experts--they have invested a lifetime with their children and know them well...and these experiences have to be considered and valued if effective AT decision-making is to occur.

Thank you again for this privilege of working with you.

PP

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- **Thanks to our many hard-working professionals and caring families!** by **Phil Parette** on Jan 30, 2005

I would also like to extend my heart-felt appreciation to all of you for not only following this discussion during the month of January, but for the contributions of those who have shared insights about working with families successfully in the AT decision-making process.

Culture is a very complex thing to understand in our increasingly complex world, and most of us will continue to learn about our own cultures as we grow and become across a lifetime. Hopefully, during that journey we will also develop heightened awareness and deeper understandings about the values of others that influence their behaviors with education professionals, and which also may have profound influences on the participation of families in AT processes.

There is a need for all of us to remain vigilant to the importance of recognizing and respecting differences across families with whom we work in the days ahead, and to continue to share our experiences and collective wisdom with others to further the AT field (which is still in its infancy). I noticed that my colleague and friend, Dave Edyburn, will be moderating next month's discussion, and I am sure he will agree that while our field is making progress, there remains much work for all of us to do.

Thank you again for this remarkable experience to participate with you in a new cultural venue--a virtual forum--as I have learned much from you! Appreciation is also extended to the FCTD for this invitation to have conversations with all of you from across the country.

If there is anything that I can do for any of you in the future, please do not hesitate to contact me. Best wishes for a successful year, and for continued success in our efforts to better serve ALL children with disabilities and their families.

Phil Parette

Recommended Resources

Families, Culture & AAC CD-ROM

Program Development Associates

<http://www.pdassoc.com>

This multimedia, multicultural CD offers both tutoring and impacts of augmentative alternative communication on families of different cultures. Includes sources of AAC devices, funds, research, plus values and learning games. ASHA Forum reviewed this resource noting, "We'd highly recommend this CD to any professional, student or family member interested in multicultural issues and AAC."

What Should We Expect of Assistive Technology? Being Sensitive to Family Goals

http://journals.sped.org/EC/Archive_Articles/VOL.35NO.1SEPTOCT2002_TEC_Article%208.pdf

Examines family concerns, goals, and expectations related to students' use of assistive technology. The article serves as a question-and-answer forum that may be helpful for Individualized Education Program (IEP) team members as they address family goals and expectations.

Family-Centered Decision-Making in Assistive Technology

<http://jset.unlv.edu/15.1/parette/PARETTE.PDF>

Presents an overview of selected family and cultural issues, and suggests ongoing questions.

Effects of Acculturation on Assistive Technology Service Delivery

<http://jset.unlv.edu/19.2/parette/first.html>

Discusses the current efforts of ensuring culturally sensitive assistive technology decision-making.

Assistive Technology: One Family's Perspective

By Thomas J. Nurse

http://www.fctd.info/resources/newsletters/upload/AssistiveTechnologyOneFamiliysPerspective_1.doc

Additional Resources

Judge, Sharon Lesar; Parette, Howard P. (1998). *Family-Centered Assistive Technology Decision Making. Infant-Toddler Intervention*. The Transdisciplinary Journal, 8(2), 185-206. EJ568729.

ABSTRACT: Discusses a family-centered assessment and intervention approach that empowers and enables families in the selection and use of assistive technology by young children with disabilities. It considers key characteristics of parent/professional partnerships; child, family, technology, and service-system domains; and the use of culturally sensitive practices in making decisions about assistive-technology devices and services.

Kemp, Crystal E. & Parette, Howard P. (2000). *Barriers to Minority Family Involvement in Assistive Technology Decision-Making Processes*. Education and Training in Mental Retardation and Developmental Disabilities, 35(4), 384-92. EJ619717. ABSTRACT: This article examines systemic barriers (i.e., racism and prejudice, equity of resources, and professionals' views of themselves being different) faced by minority families in the assistive technology decision-making process. Implications for professionals working with students with mental and developmental disabilities from minority families are drawn.

Parette, Howard P. (1997). *Family-Centered Practice and Computers for Children with Disabilities*. Early Childhood Education Journal, 25(1), 53-55. EJ554389.

ABSTRACT: Examines a family-centered approach to the prescription and delivery of computers to children with disabilities. Discusses effective team decision making regarding computers in the home environment, and the relevance of family and cultural factors, such as family routines, stress, cultural value systems, and time constraints. Considers implications for professionals working with families with children with disabilities.

Parette, Howard P., Anderson, Cindy L. (2001). *Family and Related Service Partnerships in Home Computer Decision-Making*. Special Services in the Schools, 17(1-2), 97-113. EJ627658.

ABSTRACT: Provides a review of literature related to perceptions of home computers held by various cultural groups. Argues that families vary in their degree of involvement in working with professionals to make decisions about home computers. Describes training as a primary support required by many families to ensure effective implementation of home computers.

Parette, Howard P., Brotherson, Mary Jane. (2004). *Family-Centered and Culturally Responsive Assistive Technology Decision Making*. *Infants & Young Children*, 17(4), 355-367.

ABSTRACT: A family-centered approach is recommended practice for assistive technology (AT) decision making with families who have infants and toddlers with disabilities. Involving families in AT decision making involves careful gathering of information needed to address the family strengths, needs, and priorities, and to match the AT decision-making process with the family's culture.

Parette, Howard P., Brotherson, Mary Jane & Huer, Mary Blake. (2000). *Giving Families a Voice in Augmentative and Alternative Communication Decision-Making*. *Education and Training in Mental Retardation and Developmental Disabilities*, 35(2), 77-90. EJ608110.

ABSTRACT: A study involving 58 parents of children with disabilities investigated how professionals could help families learn how to use augmentative and alternative communication (AAC) devices. Sensitivity toward child specific issues of ethnicity and disability, and parental involvement in parent-professional partnerships were stressed.

Parette, Howard P. & Petch-Hogan, Beverly. (2000). *Approaching Families: Facilitating Culturally/Linguistically Diverse Family Involvement*. *Exceptional Children*, 33(2), 4-10. EJ614789.

ABSTRACT: This article presents recommendations to increase family involvement among culturally/linguistically diverse families of children with disabilities. Recommendations include using different communication approaches, providing alternative meeting sites, providing information and training to parents, and understanding family priorities, needs, and resources, and including parents as volunteers.

Parette, Howard P. & VanBiervliet, Alan. (2000) *Culture, Families, and Augmentative and Alternative Communication (AAC) Impact: A Multimedia Instructional Program for Related Services Personnel and Family Members*. Executive Summary and Final Report. ED439541.

ABSTRACT: This report details the outcomes of a project designed to develop decision-making strategies and materials related to the prescription of augmentative and alternative communication (AAC) devices for children with disabilities. The project resulted in the development of the first interactive, bilingual CD-ROM designed to be used by related services personnel, vendors, and family members from diverse cultures to develop competencies that assist in effective AAC decision making.